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EXAMINER	
NGUYEN, PHUONGCHI T	
ART UNIT	PAPER NUMBER
2833	

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/729,806	NUDD ET AL.
	Examiner	Art Unit
	Phuongchi Nguyen	2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

☒ Attachment 1

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Objections

1. Claims 2 and 13 are objected to under 37 CFR 1.75(c) as being in improper form because the limitation "the electrically conductive means...the external electrical power source" of claims 2 and 13, lines 1-3, is a multiple dependent of claim 1, lines 6-8. See MPEP § 608.01(n). Accordingly, that limitation in claims 2 and 13 have not been further treated on the merits.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Marshall et al (US4085991).

In regarding to claim 1, Marshall et al discloses an electrical plug (20) for substantially avoiding unintended disconnection of an external electrically powered device (mating electrical device) connected to the electrical plug (20), the electrical plug (20) comprising a body (of 20); and electrically conductive means (of 24) disposed in the body (of 20), the electrically conductive means (of 24) being configured to provide increased tension mechanical contact (when 60 of 56 connects to 46 and 24) between the plug (20) and the external (mating) electrical power source/ the external electrical device (at other end of the cable connected to the plug).

In reading to claim 18, Mrashall et al discloses an apparatus that attaches to a standard electrical male plug (of 20) at one end of an electrical cable (26) attached at a second end to an (other) electrically powered device, the apparatus comprising a body (30) comprising a standard female receptacle (25) at a first end, the receptacle (25) comprising at least two sockets (34) into

which at least two (mating) prongs (24) of the standard electrical plug (of body 20) are selectively inserted; an electrical cable (26) disposed at a second end of the body (30), the electrical cable (26) being electrically coupled to the sockets of the receptacle (25), the electrically conductive means (of 46) disposed in the body (30) for connection of an external source of (mating) electrical power to the electrically powered device (at the end of the cable connected to the plug), the electrically conductive means (of 46) being configured to provide increased tension mechanical contact between the electrically conductive means (of 46) and an external source of (mating) electrical power; and a locking mechanism (of 56) to secure the standard electrical plug (of 20) to the apparatus (25) (figure 1).

In reading to claim 20, Mrashall et al further discloses the apparatus wherein the locking mechanism (of 56) comprises a latch (56) mounted to the body (30) for locking at least one prong (24) of the standard electrical male plug (of 20) to the apparatus (25) (figures 1 and 5).

4. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by A.E.Grant (US2145596).

In regarding to claim 1, A.E.Grant discloses (figure 3) an electrical plug (10) for substantially avoiding unintended disconnection of an external electrically powered device (mating electrical device) connected to the electrical plug, the electrical plug (10) comprising a body (11); and electrically conductive means (of 25) disposed in the body (11), the electrically conductive means (of 25) being configured to provide increased tension mechanical contact (when 10 connects to 30) between the plug (10) and the external (mating) electrical power source/device (30).

In regarding to claim 2, A.E.Grant discloses the electrical plug (10) comprising the electrically conductive means (of 25) comprising at least two prongs (25) having respective proximal ends (of 28') disposed in the body (11) and having respective distal ends (of 26 outside body 11) adapted for insertion in an electrical power outlet (30), the proximal (of 28') and distal ends (of 26) being spanned (distanced) by respective edges (distal end of 26) and longitudinal surfaces, at least one of the prongs (25) being recurved or arched (adjacent 26) along the edges (distal end of 26) to increase tension between the at least one prong and a socket of the electrical power outlet (30) (figures 3 and 5).

In regarding to claim 3, A.E.Grant discloses the electrical plug (10) wherein at least one of the prongs (25) has a roughened surface (a bend between 26 and 25) so that fiction is increased between the at least one prong (25) and the socket of the electrical power outlet (30) into which the plug (10) is selectively inserted (figure 3).

In regarding to claim 4, A.E.Grant discloses the electrical plug (10) wherein the at least one prong (25) is provided with non-planar edges (adjacent 28) (figure 5).

In regarding to claim 5, A.E.Grant discloses the electrical plug (10) wherein the recurving or arching (adjacent 26) extends along only a (front) portion of the prong (25) (figure 5).

In regarding to claim 6, A.E.Grant discloses the electrical plug (10) wherein the at least one prong comprises a plurality of recurved or arched (front) portions (adjacent 26) spaced along (and on) the length of the at least one prong (25) (figure 5).

5. Claims 1, 10-13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by E.H.Terlinde (US2850711).

In regarding to claim 1, E.H.Terlinde discloses an electrical (male/female) plug (of 10; of 30) comprising a body (10, 30); and electrically conductive means (of 11, 12; of 32, 33) disposed in the body (10; 30), the electrically conductive means (of 11, 12; of 32, 33) being configured to provide increased tension mechanical contact (between 11, 12 and 32, 33) between the plug (of 10; of 30) and the external (mating) electrical power source (30)/ the external electrical device (at other end of the cable connected to the plug)(figure 1).

In regarding to claim 10, E.H.Terlinde discloses (figures 1 and 3) the electrical (male) plug (of 10) wherein the electrically conductive means (of 11, 12) comprises an electrical male plug comprising at least two prongs (11, 12) splayed inwardly to increase tension between the prongs (11, 12) and sockets of an electrical power outlet (30), a spring mechanism (by body 10) that exerts a force on the prongs (11, 12) to splay the prongs (11, 12); and means (of 19) for enabling a counted force to be exerted on the spring mechanism (by body 10) to reduce the splaying of the prongs (11, 12) to enable the prongs (11, 12) to be more easily inserted into or removed from the electrical power outlet (30).

In regarding to claim 11, E.H.Terlinde discloses the electrical plug wherein the body (10) is constructed from resilient material (column 1, lines 67-68) and the spring mechanism (by body 10) results from the resilient characteristic of the material used in the construction of the body (10).

In regarding to claim 12, E.H.Terlinde discloses the electrical plug wherein the means (of 19) that exerts a counter force on the spring mechanism (by body 10) to reduce the splaying of the prongs (11, 12) to enable the prongs (11, 12) to be more easily inserted into or removed from the sockets of the (mating) electrical power outlet; a portion of the body (10) of the plug in

contact with the resilient material adapted to be squeezed to compress the resilient material (column 2, lines 66-69).

In regarding to claim 13, E.H.Terlinde discloses (figure 8) the electrical (female) plug wherein the electrically conductive means (of 32, 33) at least two sockets (recesses having 32, 33) disposed in the body (30) adapted for insertion of male electrical contacts (11, 12); and female contacts (32, 33) disposed in at least one of the two sockets (recess having 32, 33) and configured to provide increased tension mechanical contact with at least one of the male electrical contacts (11, 12).

In regarding to claim 15, E.H.Terlinde discloses (figure 8) the electrical plug wherein the female contacts (32, 33) are cantilevered to increase tension with at least one of the male electrical contacts (11, 22).

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Phillips (US6171129B1).

In regarding to claim 1, Phillip discloses (figure 6) an electrical plug (150) comprising a body (152); and electrically conductive means (of 26a, 26b) disposed in the body (152), the electrically conductive means (of 26a, 26b) being configured to provide increased tension mechanical contact (26a, 26b) between the plug (150) and the external (mating) electrical power source/ the external electrical device (at other end of the cable connected to the plug)(figure 6).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would

have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over A.E.Grant (US2145596) in view of W.A.Gammel.Sr. (US3264597).

In regarding to claim 7, A.E.Grant discloses the invention, but lacks an opposite facing recurved portions or arches prong. However, A.E.Gammel.Sr. teaches an electrical plug (C) wherein the at least one prong (51) has opposite facing recurved portions or arches (F1, F2) to increase tension between the at least one prong (51) and the socket of the electrical power outlet (B) (attachment 1 of figures 1 and 4-5) . It would have been obvious to one having ordinary skill at the time the invention was made to modify the contact prong of A.E.Grant by having an opposite facing recurved portions or arches prong as taught by W.A.Gammel to increase fictions between the contacts.

In regarding to claim 8, A.E.Grant discloses the invention, but lacks only a portion of the length of the prong having the opposite facing recurved portions/arches. A.E.Gammel. Sr. has the opposite facing recurved portions or arches extend over and repeat on a plurality of portions of the length of the prong. It would have been obvious to one having ordinary skill at the time the invention was made to modify the contact prong of A.E.Grant by reducing a number of an opposite facing recurved portions/arches prong as taught by W.A.Gammel by having only one the opposite facing recurved portions/arches on only one portion of the length of the prong with the remainder portion of the prong being a planar surface to control the tension level between contacts for ease to disconnect when the user needed.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over A.E.Grant (US2145596).

In regarding to claim 9, A.E.Grant discloses the invention, but lacks the at least one of prong comprises an asymmetric (no balance) arch. It would have been obvious of design to provide on the contact prong of A.E.Grant an asymmetric arch; because a recurred/arched prong and the asymmetric arch prong are having the same function.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over E. H.Terlinde (US2850711) in view of Marshall et al (US4085991).

In regarding to claim 14, E.H.Terlinde discloses the invention, but lacks a recurred/arched female contact. However, Marshall et al teaches (figure 10) the electrical plug wherein the female contacts (86, 86) are recurved or arched to increase tension with at least one of the male electrical contacts (24, 24). It would have been obvious to one having ordinary skill at the time the invention was made to modify the contact prong of E.H.Terlinde by having recurved portions/arches female contacts as taught by Marshall et al to increase the physical tension between female and prong contacts.

11. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (US6171129B1).

In regarding to claim 16, Phillip discloses (figure 1) the electrical plug further comprising an electrical cable (156) is connected at one end to the plug (150) and at a second end (of the cable) to an external electrical power source/an external electrically powered device (154). Phillip discloses the invention, but lacks an expandable cable. . It would have been obvious to one having ordinary skill at the time the invention was made to modify the cable of Philip by having an expandable cable in length for ease stretching the cable to reach the larger distance.

In regarding to claim 17, further in view of claims 13 and 16, Phillips discloses the invention, but lacks the tension mechanical contact in the range of 10 to 25 pounds between the plug and the external power source/the external power device. It would have been obvious to one having ordinary skill at the time the invention was made to provide the tension between the contacts of the plug of Phillips in the range of 10 to 25 pounds to the external power source/device for the having a certain tension level between the contacts for right-fitting with the curvature of the contacts to ease connect and/or disconnect the plug and the external device.

12. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall et al (US4085991) in view of Thibault et al (US5567172).

In reading to claim 19, Mrashall et al discloses the invention, but lacks a strap and a hook. However, Thibault et al teaches the locking mechanism comprises a strap (230) and a hook (220) mounted to the body (212) for locking the standard connector to an apparatus (figure 6). It would have been obvious to one having ordinary skill at the time the invention was made to modify the locking mechanism of Marshall et al by having a strap and a hook as taught by Thibault et al for increasing the security between the plug and the receptacle connectors.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Lindow et al (US4969833); Ursich (US5413498); Torok (US5197897) Burton (US6676428), Kaufman (US4253721); Wen-Te (US5454729); Peterson (US3975077); Baldwin (US5630726) are cited to show in the electrical connector having a plurality of recurred or arched prongs.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchi Nguyen whose telephone number is (571) 272-2012. The examiner can normally be reached on 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PCN

September 19, 2004

ROSS GUSH.
PRIMARY EXAMINER